

What is claimed is:

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1. A method for prolonging the residence time of an orally or enterally administered substance by promoting its dissolution, bioavailability and/or absorption in the small intestine, comprising administering to a subject in need of the treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution, absorption promoting and/or gastrointestinal transit slowing composition comprising a carrier and a dispersion consisting essentially of an
5 active lipid in the carrier, the active lipid being selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective to promote contact of the lipid with the subject's small intestine and, thereby prolong the residence time of an orally or enterally
10 administered substance in the small intestine for a period of time effective to increase dissolution, bioavailability, and/or absorption of the substance therethrough.
2. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is administered orally.
- 15 3. The method of claim 2, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is administered up to about 24 hours prior to the administration of the substance.
4. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is
20 administered concurrently with the substance.
5. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is a liquid or a solid.
6. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion,
25 dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is tube-delivered.
7. The method of claim 1, wherein the active lipid comprises fully hydrolyzed fats.

8. The method of claim 1, wherein the active lipid comprises a fatty acid or a pharmaceutically acceptable salt thereof.

30 9. The method of claim 1, wherein the active lipid is:

- (A) a fatty acid selected from the group of (C₄-C₂₄) saturated and unsaturated fatty acids;
- (B) a pharmaceutically acceptable salt of any of (A); or
- (C) a mixture of any of (A) or (B).

10. The method of claim 1, wherein the active lipid is selected from the group consisting of:

- 35 (A) caproic acid, caprylic acid, capric acid, lauric acid, myristic acid, oleic acid, palmitic acid, stearic acid, palmitoleic acid, linoleic acid, linolenic acid, trans-hexadecanoic acid, elaidic acid, columbinic acid, arachidic acid, behenic acid, eicosenoic acid, erucic acid, brassidic acid, cetoleic acid, nervonic acid, Mead acid, arachidonic acid, timnodonic acid, clupanodonic acid, or docosahexaenoic acid;
- 40 (B) pharmaceutically acceptable salts of any of (A); and
- (C) mixtures of any of (A) or (B).

11. The method of claim 10, wherein the active lipid comprises oleic acid or a pharmaceutically acceptable oleate salt.

12. A method for prolonging the residence time of an orally administered substance by promoting its dissolution, bioavailability and/or absorption in the small intestine, comprising administering orally to a subject in need of the treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats and mixtures thereof, in an amount and in a form effective to promote contact of the lipid with the subject's small intestine and, thereby, prolong the residence time of an orally or enterally administered substance to allow dissolution or to enhance bioavailability through the small intestine for a period of time effective to increase substance absorption therethrough.

13. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is administered up to about 24 hours prior to the administration of the substance.

14. The method of claim 1, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition is administered concurrently with the substance.

15. The method of claim 1, wherein the active lipid comprises fully hydrolyzed fats.

16. The method of claim 1, wherein the active lipid comprises a fatty acid or a pharmaceutically acceptable salt thereof.

17. The method of claim 16, wherein the fatty acid or pharmaceutically acceptable salt thereof is selected from the group of (C₄-C₂₄) saturated and unsaturated fatty acids and mixtures thereof.

18. The method of claim 17, wherein the fatty acid or pharmaceutically acceptable salt thereof is selected from the group consisting of

- (A) caproic acid, caproic acid, capric acid, lauric acid, myristic acid, oleic acid, palmitic acid, stearic acid, palmitoleic acid, linoleic acid, linolenic acid, trans-hexadecanoic acid, elaidic acid, columbinic acid, arachidic acid, behenic acid eicosenoic acid, erucic acid, brassidic acid, cetoleic acid, nervonic acid, Mead acid, arachidonic acid, timnodonic acid, clupanodonic acid, docosahexaenoic acid;
- 5 (B) a pharmaceutically acceptable salt of any of (A); and
- (C) a mixture of any of (A) or (B).

19. The method of claim 1, wherein the fatty acid comprises oleic acid, a pharmaceutically acceptable oleate salt, or a mixture of either of these with other fatty acids or salts thereof.

20. The method of claim 1, wherein oral administration is by ingestion of coated or uncoated microspheres or particles, of a dispersible powder or granule formulation, of a suspension, emulsion, solution, syrup, or elixir, or of a coated or uncoated tablet, troche, capsule, caplet, or lozenge.

21. A method of treating a gastrointestinal disorder by slowing the gastrointestinal transit of an orally or enterally administered substance in a subject, comprising administering to a subject in need of the treatment at least one dose of a composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective to promote contact of the lipid with the subject's small intestine and, thereby, slow the gastrointestinal transit of an orally or enterally administered substance through the small intestine.

22. The method of claim 21, wherein the gastrointestinal transit of the substance through the small intestine is slowed for a period of time effective for absorption of the substance to occur.

23. The method of claim 22, wherein the increased absorption of the substance is associated with the slowing of the gastrointestinal transit of the substance through the small intestine.

24. A method of enhancing the digestion and absorption of orally or enterally administered nutrients and/or pharmacological agents, comprising administering to a subject in need of the treatment at least one dose of a composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective to promote the contact of the active lipid with the small intestine and, thereby, prolong the residence time and enhance the digestion and absorption of orally or enterally administered nutrients and/or pharmacological agents in the small intestine.

25. A method for reducing diarrhea, comprising administering to a subject in need of the treatment at least one dose of a composition comprising an active lipid selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats, and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective to promote contact of the active lipid with the small intestine, and prolong the residence time of the luminal contents of the small intestine and, thereby, reduce diarrhea.

26. A method of reducing the serum level of atherogenic lipids derived from an ingested substance, comprising administering to a subject in need of the treatment a composition comprising an active lipid selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed fats, and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective for promoting contact of the active lipid with small intestine, prolong the residence time in the small intestine of the ingested substance and, thereby, reduce atherogenic lipid serum levels.

27. The method of claim 26, wherein the composition is administered in an amount and in a form effective for limiting the spread and increasing the contact of the ingested substance with the proximal segment of the small intestine.

28. A method of enhancing the bioavailability of an orally ingested pharmacological agent by promoting a digestive, dissolving, absorptive, anti-atherogenic, anti-diarrheal and/or gastrointestinal transit slowing effect, comprising administering to a subject in need of the treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of saturated and unsaturated fatty acids, fully hydrolyzed lipid and mixtures thereof, in an amount of about 0.5 to about 25 grams per dose and in a form effective for promoting the contact of the lipid with the subject's small intestine, promoting an anti-atherogenic, anti-diarrheal, digestive, dissolving and/or absorptive effect and, thereby, prolonging residence time, enhancing the dissolution, bioavailability and/or absorption of an ingested pharmacological agent in the small intestine.

29. The method of claim 28, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered prior to administration of the pharmacological agent.

30. The method of claim 29, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered about 5 to about 60 minutes prior to administration of the pharmacological agent.

31. The method of claim 28, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered concurrently with the agent.

32. An anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing controlled release oral composition, comprising a dispersion in a carrier of a plurality of particles which comprise an active lipid selected from the group consisting of
(A) saturated and unsaturated fats;
(B) fully hydrolyzed fats;
(C) pharmaceutically acceptable salts of any of (A) or (B); and
(D) mixtures of any of (A), (B), or (C);
and further comprising a controlled release coating thereon, which coating upon ingestion releases the active lipid and the particles and promotes their absorption, into the proximal segment of the small intestine by effecting and sustaining gastrointestinal transit slowing, dissolution, bioavailability and/or absorption promotion and/or an anti-diarrheal and/or anti-atherogenic effect.

33. An anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing liquid enteral composition, comprising a liquid carrier and a dispersion in the carrier consisting essentially of a substance and an active lipid selected from the group consisting of
(A) saturated and unsaturated fats;
(B) fully hydrolyzed fats;
(C) pharmaceutically acceptable salts of any of (A) or (B); and
(D) mixtures of any of (A), (B), or (C), which composition upon ingestion releases the active lipid into the proximal segment of the small intestine, so as to prolong the residence time of the substance in the small intestine and, thereby, increase substance digestion, dissolution, bioavailability and/or absorption and/or anti-diarrheal and/or anti-atherogenic effect.

34. A method of enhancing the absorption of a substance in the small intestine and promoting anti-atherogenesis, anti-diarrheal, digestion, and/or dissolution, and/or slowing gastrointestinal transit, comprising administering to a subject in need of the treatment at least one dose of the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting,

and/or gastrointestinal transit slowing liquid enteral composition of claim 33, in an amount of about 0.5 to about 25 grams per dose and for a period of time effective for the active lipid to contact and be absorbed through the small intestine and, thereby, prolong the residence time, promote digestion, bioavailability and/or absorption of the substance in the small intestine and/or have an anti-diarrheal and/or anti-atherogenic effect.

35. A method of enhancing the absorption of an orally administered substance and promoting an anti-atherogenic and/or anti-diarrheal effect, and promoting digestion and dissolution, and slowing gastrointestinal transit, comprising administering to a subject in need of treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing oral composition, comprising a core comprising a substance selected from the group consisting of nutrients and pharmacological agents and a coating thereon comprising an active lipid selected from the group consisting of (A) saturated and unsaturated fatty acids; (B) pharmaceutically acceptable salts of any of (A); and (C) mixtures of any of (A) or (B), said active lipid in an amount of about 0.5 to about 25 grams per dose, effective for promoting contact of the active lipid with, and its absorption from, the proximal segment of the small intestine, thereby prolonging the residence time and increasing the digestion and absorption of the substance in the small intestine and promoting an anti-atherogenic and/or anti-diarrheal effect.

36. The method of claim 35, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

37. A method of treating a gastrointestinal disorder by slowing the gastrointestinal transit of an orally administered substance in a subject, comprising administering to a subject in need of the treatment at least one dose of a composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of

5 (A) saturated and unsaturated fatty acids;

(B) fully hydrolyzed fats;

(C) pharmaceutically acceptable salts of any of (A); and

10 (D) mixtures of any of (A), (B) or (C), in an amount and in a form effective to promote contact of the lipid with the subject's small intestine and, thereby, slow the gastrointestinal transit of an orally or enterally administered substance through the small intestine.

38. The method of claim 37, wherein the active lipid is administered in an amount of about 0.5 to about 25 grams per dose.

39. The method of claim 37, wherein the gastrointestinal transit of the substance through the gastrointestinal tract is slowed for a period of time effective for absorption of the substance to occur.

40. The method of claim 39, wherein the increased absorption of the substance is associated with the slowing of the gastrointestinal transit of the substance through the small intestine.

41. A method of enhancing the digestion and absorption of orally administered nutrients and/or pharmacological agents, comprising administering to a subject in need of the treatment at least one dose of a composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of
5 (A) saturated and unsaturated fatty acids;
(B) fully hydrolyzed fats;
(C) pharmaceutically acceptable salts of any of (A); and
(D) mixtures of any of (A), (B) or (C), in an amount and in a form effective to promote the contact of the active lipid with the small intestine and, thereby, prolong the residence time and
10 enhance the digestion and absorption of orally administered nutrients and/or pharmacological agents in the small intestine.

42. The method of claim 41, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

43. A method for reducing diarrhea, comprising administering orally to a subject in need of the treatment a composition comprising an active lipid selected from the group consisting of
(A) saturated and unsaturated fatty acids;
(B) fully hydrolyzed fats;
5 (C) pharmaceutically acceptable salts of any of (A); and

(D) mixtures of any of (A), (B) or (C), in an amount, and in a form effective to promote contact of the active lipid with the small intestine, and prolong the residence time of the luminal contents of the small intestine and, thereby, reduce diarrhea.

44. The method of claim 43, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

45. A method of reducing the serum level of atherogenic lipids derived from an ingested substance, comprising administering to a subject in need of the treatment at least one dose of a composition comprising an active lipid selected from the group consisting of

(A) saturated and unsaturated fatty acids;

(B) fully hydrolyzed fats;

(C) pharmaceutically acceptable salts of any of (A); and

(D) mixtures of any of (A), (B) or (C), in an amount and in a form effective for promoting contact of the active lipid with small intestine, prolong the residence time in the small intestine of the ingested substance and, thereby, reduce atherogenic lipid serum levels.

46. The method of claim 45, wherein the composition is administered in an amount and in a form effective for limiting the spread and increasing the contact of the ingested substance with the proximal segment of the small intestine.

47. The method of claim 45, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

48. A method of enhancing the bioavailability of an orally ingested pharmacological agent by promoting a digestive, dissolving, absorptive, anti-atherogenic, anti-diarrheal and/or gastrointestinal transit slowing effect, comprising administering orally to a subject in need of the treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition comprising a carrier and a dispersion consisting essentially of an active lipid in the carrier, the active lipid being selected from the group consisting of

(A) saturated and unsaturated fatty acids;

(B) fully hydrolyzed fats;

10 (C) pharmaceutically acceptable salts of any of (A); and

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(D) mixtures of any of (A), (B) or (C), in an amount and in a form effective for promoting the contact of the lipid with the subject's small intestine, promoting an anti-atherogenic, anti-diarrheal, digestive, dissolving and/or absorptive effect and, thereby, prolonging residence time, enhancing the dissolution, bioavailability and/or absorption of an ingested pharmacological agent in the small intestine.

49. The method of claim 48, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

50. The method of claim 48, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered prior to administration of the pharmacological agent.

51. The method of claim 48, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered about 5 to about 60 minutes prior to administration of the pharmacological agent.

52. The method of claim 48, wherein the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition is administered concurrently with the agent.

53. A method of enhancing the absorption of an orally administered substance and promoting an anti-atherogenic and/or anti-diarrheal effect, and promoting digestion and dissolution, and slowing gastrointestinal transit, comprising administering to a subject in need of treatment at least one dose of an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing oral composition configured in a coated or uncoated tablet, capsule, or caplet form, comprising a core comprising a substance selected from the group consisting of nutrients and pharmacological agents and a coating thereon comprising an active lipid selected from the group consisting of

(A) saturated and unsaturated fatty acids;

(B) pharmaceutically acceptable salts of any of (A); and

(C) mixtures of any of (A) or (B), in an amount effective for promoting contact of the active lipid with, and its absorption from, the proximal segment of the small intestine, thereby prolonging

the residence time and increasing the digestion and absorption of the substance in the small intestine and promoting an anti-atherogenic and/or anti-diarrheal effect.

54. The method of claim 53, wherein the active lipid is administered in an amount of about 0.5 to about 25 g/dose.

55. An enteral anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition, comprising a first component comprising an active ingredient to be absorbed through the small intestine; a second component comprising a carrier dispersible form of an active lipid selected from the group consisting of

(A) saturated and unsaturated fats;

(B) fully hydrolyzed fats;

(C) pharmaceutically acceptable salts of any of (A) or (B); and

(D) a mixture of any of (A), (B), or (C);

an enteric coating which releases the first and the second components into the proximal segment of the small intestine, where the lipid slows transit and increases digestion, dissolution and/or residence time in, and absorption through, the small intestine without significant degradation and, thereby, increases absorption of the active ingredient thereof through in the presence of the active lipid than in its absence.

56. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55, wherein the active ingredient is selected from the group consisting of nutrients and pharmacological agents.

57. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 56, wherein the nutrients are selected from the group consisting of foodstuffs, vitamins and minerals.

58. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 56, wherein the pharmacological agents are selected from the group consisting of somatostatin analogues, insulin release inhibitors, anti-diarrheal agents, antibiotics, fiber, electrolytes, analgesics, antipyretics, migraine treatment, migraine prophylaxis, antifungal agents antiviral agents, Quinolones, AIDS

therapeutic agents, anti-infectives, aminoglycosides, antispasmodics, parasympathomimetics, anti-tuberculous agents, anti-malarial agents, accines, anti-parasitic agents, cephalosporins, macrolides, azalides, tetracyclines, penicillins, anti-arthritic therapy agents, gout therapy agents, nonsteroidal anti-inflammatory agents, gold compounds, antianemic agents, antianginal agents, antiarrhythmics, anticoagulants, post-MI agents, vasodilators, beta-adrenergic blockers, calcium channel blockers, nitrates, thrombolytic agents, anticoagulants, antifibrotic agents, hemorrhologic agents, antiplatelet agents, vitamins, antihemophilic agents, heart failure agents, ACE inhibitors, cardiac glycosides, blood flow modifying agents, bile salts, growth promoting agents, growth suppressive agents, sympathomimetics, inotropic agents, antihypertensive agents, central alpha-adrenergic agonists, peripheral vasodilator, sympatholytics, diuretics, diuretic combinations, mineral supplements, hypolipidemic agents, acne treatments, antidiarrheal agents, antinauseants, antiemetics, antispasmodics, antiulcer, antireflux agents, appetite suppressants, appetite enhancers, gallstone-dissolving agents, gastrointestinal anti-inflammatory agents, antacids, antiflatulents, anti-gas agents, laxatives, stool softeners, digestants, digestive enzymes, enzyme supplements, alzheimer's therapy, anticonvulsants, antiparkinson agents, sedatives, benzodiazepines, benzodiazepine receptor antagonists, receptor agonists, receptor antagonists, interferons, immunosuppressive therapy, immunomodulatory agents, muscle relaxants, hypnotics, antianxiety agents, antimanic agents, antidepressants, antiobesity agents, behavior modifiers, psychostimulants, neurostimulants, abuse deterrents, anxiolytics, antipsychotics, antianaphylactic agents, antihistamines, antipruritics, anti-inflammatory agents, bronchodilators, antiasthmatic agents, cystic fibrosis therapy agents, mast-cell stabilizers, steroids, xanthines, anticholinergic agents, bioactive peptides, polypeptides, hormones, drugs acting at neuroeffector junctional sites, prostaglandins, narcotics, hypnotics, alcohols, psychiatric therapy agents, anti-cancer chemotherapy agents, drugs affecting motility, oral hypoglycemics, androgens, estrogens, nutraceuticals, herbal medications, insulin, serotonin receptor agonist, serotonin receptor antagonists, alternative medicines, amino acids, dietary supplements, analeptic agents, respiratory agents, cold remedies, cough suppressants, antimycotics, bronchodilators, constipation aids, contraceptives, decongestants, expectorants, motion sickness products, homeopathic preparations.

59. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55, further comprising an additional ingredient selected from the group consisting of carriers, ~~excipients~~, vehicles, lipid dispersants,

detergents, bile acid salts, and suspending, emulsifying, stabilizing, thickening, buffering, preserving, coloring, disintegrating, solubilizing, flavoring and sweetening agents.

60. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 59, wherein the carriers are selected from the group consisting of solid, semisolid or liquid glucose, lactose, gum acacia, gelatin, mannitol, starch paste, magnesium trisilicate, talc, corn starch, keratin, colloidal silica, potato starch, urea, medium chain length triglycerides and dextrans.

61. A lipid dispersion, comprising the anti-diarrheal, anti-atherogenic, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55, and a lipid dispersant comprising an aqueous solution of an agent selected from the group consisting of at least one bile salt, at least one agent alkaline buffer and a detergent.

62. A lipid emulsion, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55, and a lipid dispersant comprising an agent which in the presence of the active lipid forms a two-phase emulsion.

63. A lipid suspension, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 55, and a lipid comprising a solid agent which forms a suspension with the active lipid.

64. An emulsion, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 55, emulsifiers and suspending agents, the emulsifiers and suspending agents being selected from the group consisting of gum acacia, agar, sodium alginates, bentonites, carbomers, celluloses, carrageenan, carboxymethyl celluloses, cholesterol, gelatins, octoxynol 9, oleyl alcohols, polyvinyl alcohols, povidone, propylene glycol monostearates, sodium lauryl sulfate, sorbitan esters, stearyl alcohol, tragacanth, xantham gum, chondrus, glycerin, trolamine, coconut oil, propylene glycol, ethyl alcohol, malt, malt extracts and mixtures thereof.

65. A cellulose emulsion, comprising the emulsion of claim 62, and celluloses which are selected from the group consisting of cellulose, hydroxyethyl celluloses, hydroxypropyl celluloses, hydroxypropyl methylcelluloses, methylcelluloses and mixtures thereof.

66. An oral formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 55, and an oral carrier.

67. The oral formulation of claim 66, being in a form selected from the group consisting of capsules, coated and uncoated microspheres and particles, which may be encapsulated, coated and uncoated tablets, troches, lozenges, aqueous and oily suspensions, dispersible powders and granules, emulsions, hard and soft capsules, syrups and elixirs.

68. A controlled release formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55, and a controlled release coating.

69. A slow release formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55 and a slow release coating.

70. A liquid enteric formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 55.

71. The liquid enteric formulation of claim 70, wherein the active ingredient comprises a dispersion of essential nutrients, pharmacological agents or mixtures thereof.

72. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 55, wherein the amount of the active lipid is about 0.5 to about 25 gram per dose.

73. An anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition formulated for oral delivery, comprising

not coated
enteric

- a first component comprising an active ingredient to be absorbed through the stomach or small intestine;
- 5 a second component comprising an amount of a carrier dispersible form of an active lipid selected from the group consisting of
- (A) saturated and unsaturated fats;
- (B) fully hydrolyzed fats;
- (C) pharmaceutically acceptable salts of any of (A) or (B); and
- 10 (D) a mixture of any of (A), (B), or (C).

74. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 73, wherein the amount of the active lipid is about 0.5 to about 25 gram per dose.

75. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 73, further comprising an oral carrier.

76. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 73, wherein the active ingredient is selected from the group consisting of nutrients and pharmacological agents.

77. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 76, wherein the nutrients are selected from the group consisting of foodstuffs, vitamins and minerals.

78. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 76, wherein the pharmacological agents are selected from the group consisting of somatostatin analogues, insulin release inhibitors, anti-diarrheal agents, antibiotics, fiber, electrolytes, analgesics, antipyretics, migraine treatment, migraine prophylaxis, antifungal agents, antiviral agents, Quinolones, AIDS therapeutic agents, anti-infectives, aminoglycosides, antispasmodics, parasympathomimetics, anti-tuberculous agents, anti-malarial agents, accines, anti-parasitic agents, cephalosporins, macrolides, azalides, tetracyclines, penicillins, anti-arthritic therapy agents, gout therapy agents, nonsteroidal anti-inflammatory agents, gold compounds, antianemic agents, antianginal agents,

antiarrhythmics, anticoagulants, post-MI agents, vasodilators, beta-adrenergic blockers, calcium channel blockers, nitrates, thrombolytic agents, anticoagulants, antifibrotic agents, hemorrhheologic agents, antiplatelet agents, vitamins, antihemophilic agents, heart failure agents, ACE inhibitors, cardiac glycosides, blood flow modifying agents, bile salts, growth promoting agents, growth suppressive agents, sympathomimetics, inotropic agents, antihypertensive agents, central alpha-adrenergic agonists, peripheral vasodilator, sympatholytics, diuretics, diuretic combinations, mineral supplements, hypolipemic agents, acne treatments, antidiarrheal agents, antinauseants, antiemetics, antispasmodics, antiulcer, antireflux agents, appetite suppressants, appetite enhancers, gallstone-dissolving agents, gastrointestinal anti-inflammatory agents, antacids, antiflatulents, anti-gas agents, laxatives, stool softeners, digestants, digestive enzymes, enzyme supplements, alzheimer's therapy, anticonvulsants, antiparkinson agents, sedatives, benzodiazepines, benzodiazepine receptor antagonists, receptor agonists, receptor antagonists, interferons, immunosuppressive therapy, immunomodulatory agents, muscle relaxants, hypnotics, antianxiety agents, antimanic agents, antidepressants, antiobesity agents, behavior modifiers, psychostimulants, neurostimulants, abuse deterrents, anxiolytics, antipsychotics, antianaphylactic agents, antihistamines, antipruritics, anti-inflammatory agents, bronchodilators, antiasthmatic agents, cystic fibrosis therapy agents, mast-cell stabilizers, steroids, xanthines, anticholinergic agents, bioactive peptides, polypeptides, hormones, drugs acting at neuroeffector junctional sites, prostaglandins, narcotics, hypnotics, alcohols, psychiatric therapy agents, anti-cancer chemotherapy agents, drugs affecting motility, oral hypoglycemics, androgens, estrogens, nutraceuticals, herbal medications, insulin, serotonin receptor agonist, serotonin receptor antagonists, alternative medicines, amino acids, dietary supplements, analeptic agents, respiratory agents, cold remedies, cough suppressants, antimycotics, bronchodilators, constipation aids, contraceptives, decongestants, expectorants, motion sickness products, homeopathic preparations.

79. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 73, further comprising an additional ingredient selected from the group consisting of carriers, excipients, vehicles, lipid dispersants, detergents, bile acid salts, and suspending, emulsifying, stabilizing, thickening, buffering, preserving, coloring, disintegrating, solubilizing, flavoring and sweetening agents.

80. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 79, wherein the carrier is selected

from the group consisting of solid, semisolid or liquid glucose, lactose, gum acacia, gelatin, mannitol, starch paste, magnesium trisilicate, talc, corn starch, keratin, colloidal silica, potato starch, urea, medium chain length triglycerides and dextrans.

81. The oral formulation of claim 73, being in a form selected from the group consisting of capsules, coated and uncoated microspheres and particles, which may be encapsulated, coated or uncoated tablets, troches, lozenges, aqueous and oily suspensions, dispersible powders and granules, emulsions, hard and soft capsules, syrups and elixirs.

82. A controlled release formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 73, and a controlled release coating.

83. A slow release formulation, comprising the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting, and/or gastrointestinal transit slowing composition of claim 73 and a slow release coating.

84. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 73, wherein the active lipid is selected from the group consisting of (C_4 to C_{24}) fatty acids, pharmaceutically acceptable salts thereof, and mixtures of either of these.

85. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 84, wherein the active lipid is selected from the group consisting of

(A) caproic acid, caprylic acid, capric acid, lauric acid, myristic acid, oleic acid, palmitic acid, stearic acid, palmitoleic acid, linoleic acid, linolenic acid, trans-hexadecanoic acid, elaidic acid, columbinic acid, arachidic acid, behenic acid, eicosenoic acid, erucic acid, bressidic acid, cetoleic acid, nervonic acid, Mead acid, arachidonic acid, timnodonic acid, clupanodonic acid, or docosaheptaenoic acid;

(B) pharmaceutically acceptable salts of any of (A); and

10 (C) and mixtures of any of (A) or (B).

no (D)

86. The anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 85, wherein the active lipid comprises oleic acid, a pharmaceutically acceptable oleate salt, or a mixture of either of these with other fatty acids or salts thereof.

87. A method of prolonging small intestine transit time while promoting an anti-atherogenic and/or anti-diarrheal effect and/or promoting digestion, dissolution and/or absorption, comprising administering orally to a subject in need of treatment at least one dose of the composition of claim 73, wherein the active lipid is absorbed through the stomach or proximal segment of the small intestine in undegraded form and, thereby, increases small intestine transit time and produces an anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing effect.

88. The method of claim 87, wherein the active lipid triggers at least one reflex selected from the group consisting of intestino-lower esophageal sphincter or relaxation of LES reflex, intestino-gastric feedback or inhibition of gastric emptying reflex, intestino-intestinal feedback or ileo-jejunal feedback/ileal brake reflex, jejuno-jejunal feedback/jejunal brake reflex, conversion to fed motility reflex, intestino-CNS feedback or satiety intensifying intestinal signaling reflex, intestino-pancreatic feedback or exocrine enzyme output control reflex, intestino-biliary feedback or bile flow control reflex, intestino-mesenteric blood flow feedback reflex for mucosal hyperemia control and intestino-colonic feedback, gastro-colonic reflex or colon contracting response to nutrients, in the proximal segment of the small intestine.

89. The method of claim 87, wherein the active lipid is administered in an amount of about 0.5 to about 25 grams per dose.

90. A method of treating a nutritional deficiency comprising administering to a subject afflicted with a nutritional deficiency at least one dose of the anti-atherogenic, anti-diarrheal, digestion, dissolution and/or absorption promoting and/or gastrointestinal transit slowing composition of claim 73, in an amount and in a form effective to deliver the active lipid to the subject's proximal segment of the small intestine and, thereby, increase absorption of nutrients through the subject's small intestine.

91. The method of claim 90, wherein the subject's nutritional deficiency is associated with gastrointestinal symptoms selected from the group consisting of rapid intestinal transit, dumping syndrome, diarrhea, weight loss, distention, steatorrhea, asthenia, poor bioavailability of oral drugs, and symptoms of specific nutrient deficiencies.

92. The method of claim 90, wherein the subject's nutritional deficiency is associated with a gastrointestinal disorder selected from the group consisting of post-gastrectomy syndrome, dumping syndrome, AIDS-associated chronic diarrhea, diabetes-associated diarrhea, post-vagotomy diarrhea, bariatrics surgery-associated diarrhea, short bowel syndrome, tube-feeding related diarrhea, chronic secretory diarrhea, carcinoid syndrome-associated diarrhea, gastrointestinal peptide tumors, endocrine tumors, chronic diarrhea associated with thyroid disorders, chronic diarrhea associated with bacterial overgrowth, chronic diarrhea in gastronomy, choleraic diarrhea, chronic diarrhea associated with giardiasis, antibiotic-associated chronic diarrhea, diarrhea-predominant irritable bowel syndrome, diarrhea associated with disordered gastrointestinal motility, chronic diarrhea associated with maldigestion and malabsorption, chronic diarrhea associated with idiopathic primary gastrointestinal motility disorders, chronic diarrhea associated with collagenous colitis, surgery-associated acute diarrhea, antibiotic-associated acute diarrhea and infection-associated acute infectious diarrhea.

93. The method of claim 90, wherein the bariatrics surgery-associated diarrhea comprises obesity surgeries selected from the group consisting of gastric bypass, gastroplasties and intestinal bypass.

94. The method of claim 92, wherein the short bowel syndrome is selected from the group consisting of including resection of the small intestine, radiation induced complications, Crohn's disease and infarction of the intestine associated with vascular occlusion.

95. The method of claim 90, wherein the active lipid is administered in an amount of about 0.5 to about 25 grams per dose.